

B. Amendments to the claims

1. (Currently Amended) A method of producing nanostructured $\text{Li}_4\text{Ti}_5\text{O}_{12}$ particles, comprising the following steps:

a) dissolving a lithium containing salt in ~~a liquid solution~~, preferably an organic solvent to form a liquid solution,

b) adding a dispersion of nanoparticles of TiO_2 to the liquid solution, said TiO_2 nanoparticles having an average primary particle size of less than 100 nm;

c) heating the liquid solution to facilitate diffusion of lithium ions into the nanoparticles;

d) separating the solids from the liquid solution; and

e) heat treating the solids to form ~~the desired~~ a crystal structure, wherein the crystals are less than 100 nm in size.

2. (Original) The method as claimed in Claim 1, wherein lithium salt is selected from the group consisting of: lithium nitrate, lithium hydroxide, lithium carbonate, lithium chloride, lithium acetate and lithium iodide.

3. (Original) The method as claimed in Claim 1, wherein the organic solvent has a boiling point in the range of 79 – 250° C.

4. (Original) The method as claimed in Claim 1, wherein the organic solvent has a boiling point of at least 100° C.

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5. (Original) The method as claimed in Claim 1, wherein average primary particle size of TiO_2 nanoparticles is in the range of 5 – 100 nm, and the average secondary (or aggregate) particle size is in the range of 25 – 1000 nm.

6. (Original) The method as claimed in Claim 1, wherein the heating step comprises refluxing.

7. (Original) The method as claimed in Claim 1, wherein the heating step comprises refluxing between 5 to 40 hrs.

8. (Original) The method as claimed in Claim 1, wherein the heating step is conducted at an atmospheric pressure in the range of 0.5 to 10 atmospheres.

9. (Original) The method as claimed in Claim 1, wherein solid particles are separated from a liquid by at least one of the following methods: filtration, evaporation and centrifuging.

10. (Currently Amended) The method as claimed in Claim 1, wherein the separated solids are mixture of a lithium salt and TiO_2 nanoparticles is heat-treated at a temperature in the range of 300 - 900° C.

11. (Currently Amended) The method as claimed in Claim 1, wherein the separated solids are mixture of a lithium salt and TiO_2 nanoparticles is heat-treated at a temperature in the range of 600 - 800° C.

12. (Currently Amended) The method as claimed in Claim 1, wherein the separated solids are
~~mixture of a lithium salt and TiO_2~~ is heat-treated for a period in the range of 1 - 24 hrs.

13. (Currently Amended) The method as claimed in Claim 1, wherein the separated solids are
~~mixture of a lithium salt and TiO_2~~ is heat-treated for a period in the range of 2 - 8 hrs.

14. (Currently Amended) The method as claimed in Claim 1, wherein the separated solids are
~~mixture of a lithium salt and TiO_2 nanoparticles~~ is heat-treated in an atmosphere containing O_2 .

15. (Currently Amended) The method as claimed in Claim 1, wherein separated solids are the
~~mixture of a lithium salt and TiO_2 nanoparticles~~ is heat-treated in an atmosphere containing an
inert gas, such as, N_2 , He or Ar.

16. (Currently Amended) The method as claimed in Claim 42 15, wherein the inert gas is
selected from the group consisting of N_2 , He and Ar.

17. (Original) Nanostructured particles of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ produced by the process of claim 1.

18. (Currently Amended) Nanostructured $\text{Li}_4\text{Ti}_5\text{O}_{12}$ particles, having a spinel type crystal
structure and ~~a particle~~ wherein the particles are composed of crystals that are less than 100
nm in size size in the range of 25 — 500 nm; the collection of particles having an average
diameter of less than about 300 nm.

19. (Original) The nanostructured $\text{Li}_4\text{Ti}_5\text{O}_{12}$ particles in Claim 18, wherein the particles are composed of nano-sized crystals that are between 20 – 100 nm in size.

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